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ABSTRACT

This review of recent literature which deals with simulation programs and materials used with school personnel cites several advantages which proponents of simulation claim for their technique and also gives detailed examples of the many purposes to which simulation can be put and the variety of modes by which it can be presented. In addition, however, it also makes the point that many of the simulation studies contain methodological shortcomings or have not been shown to have significant results, supporting the assertation with several illustrations. It closes with a call for the development of simulated materials which are empirically verified to be: 1) effective for the purposes intended, and 2) more effective than other methods used for the same purposes. (PB)

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SIMULATION PROGRAMS FOR SCHOOL PERSONNEL

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Abstract

There are many techniques and materials employed for didactic purposes, and simulated games is one of them. While simulated games and materials may be considered relatively "new" in education, they have been used frequently in other fields and the most notable example is war games.

The development of computers gave impetus to the simulation technique and helped it gain popularity. In 1970, there was initiation of a new journal titled Simulation and Games. Currently, there are many studies dealing with uses of simulated materials in the educational process. ERIC, Clearinghouse on Educational Media and Technology, is very helpful in the assimilation of references and materials.

There are several studies which demonstrate the effectiveness of simulation as a teaching-training method with elementary and secondary students. But, there are still questions as to the effectiveness of simulation as a teaching-training method with teachers, administrators, counselors, and other school personnel. This paper addresses itself to the latter questions.

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A review of recent research literature revealed many studies which presented simulation materials and programs to be used with school personnel. Most of these studies did not consider whether these programs were more effective than other programs or techniques designed for the same purposes. Many of the evaluations of programs using simulated materials were subjective; in some cases, evaluations were based only on the opinions of those who participated in the simulation experience (Wynn, 1964; Weinberger, 1965; Williams, 1971). Studies which solicited participant's opinions about the simulated materials revealed favorable attitudes (Burke & Sage, 1970; Jaspers, 1970; Broadbent & Meehan, 1971; Williams, 1971; Fredrickson & Popken, 1972).

One definite advantage of simulated materials is that participants become actively involved (Wynn, 1964; Weinberger, 1965; Kadson & Kelly, 1969; Burke & Sage, 1970; Jaspers, 1970; Broadbent & Meehan, 1971; Gunnell, 1971; Panther, 1971; Williams, 1971; Fredrickson & Popken, 1972). One principle of learning advocates active participation rather than passive participation to enhance learning. Thus, several studies discussed simulation on its merit of getting persons involved (Wynn, 1964; Jaspers, 1970; Weinberger, 1965, Williams, 1971) and implied that involvement meant learning was taking place. This may or may not be true--no statement can be made because learning, per se, was not objectively considered and/or evaluated in these studies.

Several studies considered the simulated materials worthwhile because participants indicated that they were motivated by the program (Wynn, 1964; Weinberger, 1965, Jaspers, 1970, Fredrickson & Popken, 1972). Here again, no objective methods were used to show whether

these "motivated" persons learned more than 1) "non-motivated" persons, or, 2) "motivated" persons participating in similar programs void of simulated materials.

Simulation programs can use a variety of techniques: role-playing, audio- and/or video-tapes, individual and small group exercises, large and small group discussion, case studies, in-baskets/out baskets, films, etc. Fredrickson and Popken (1972) found that counselors preferred the role-playing technique significantly over the other techniques, and Williams (1971) noted that using tapes for self-analysis was very helpful.

Simulated materials have been developed and used for a variety of purposes: to aid teachers in developing their competencies in the area of learning disabilities (Broadbent & Meehan, 1971) and in selecting appropriate reading materials for students (Kadson & Kelly, 1969); to enhance recruiter's skills and effectiveness (Jaspers, 1970; Gunnell, 1971); to give perspective directors of guidance a realistic view of time allotment on the job (Fredrickson & Popken, 1972); to train counselors in the art of consultation with teachers (Panther, 1971); and to train school personnel in the process of negotiation (Williams, 1971). One program designed for prospective special education administrators was used with regular administrators for a purpose not originally intended (Burke & Sage, 1970).

Several studies attempted to evaluate the effectiveness of their program by establishing objectives and then administering pre- and posttests (Burke & Sage, 1970; Fredrickson and Popken, 1972). These studies indicated that the simulated materials met their objectives. However, neither article considered if the objectives could

have been met more or less efficiently by other programs.

Several studies used experimental and control groups to determine how effectively simulated programs met the established objectives (Kadson & Kelly, 1969; Broadbent & Meehan, 1971; Panther, 1971). These studies found that the objectives were successfully achieved. Broadbent and Meehan (1971) found that persons who participated in the simulation workshop were better able to choose diagnostic and remedial procedures (for three case studies involving learning disabilities), in agreement with the judgment of persons knowledgeable in the field, than were teachers in a graduate course. Kadson and Kelly (1969) using two experimental groups and one control group, found that the experimental group which received simulated training with reading materials prior to the starting of school was more effective than the other experimental group (which received simulation training with reading materials after school had started) and the control group: the second experimental group was also more effective than the control group. These two studies seem to indicate that training (with simulated materials) is better than no training. They do not indicate whether training using simulated materials is better than training using other kinds of materials. Panther's (1971) study was the only article reviewed which used comparable subjects in control and experimental groups. All subjects were Master's level counselor trainees: the control group received traditional training and the experimental group used simulated materials and experiences. The results, based on the opinions of experienced teachers, indicated that the experimental group was superior to the control group in the aspect of consultation focused

upon. One problem with this study may be that the traditional training emphasized the counselor model rather than the consultant model, while the simulated training did just the opposite. Thus, it would not be surprising for the experimental group to have received a better evaluation on a consultant type task--making recommendations about children to teachers.

One important improvement needed in simulation materials as noted by Weinberger (1965) was that of getting feedback to the participants. Several of the simulation training programs incorporated this aspect (Kadson & Kelly, 1969; Jaspers, 1970; Broadbent and Meehan, 1971; Panther, 1971; Fredrickson & Popken, 1972). Feedback seems critical if participants are going to show changes in behavior or attitude in a specified direction.

Another kind of simulation is computer simulation. Gunnell (1971) developed a computer simulation program designed to train university faculty members (usually department chairmen) in the art of recuiting. This was a very rigorous study which established the utility of the model via empirical validation.

Weinberger (1965) noted that the satisfaction with simulation and the amount of behavior change, appeared to be related to the participant's feelings of involvement and of reality of role. This observation seems to be borne out in more recent studies (Burke & Sage, 1970; Williams, 1971; Fredrickson & Popken, 1972).

Weinberger (1965) also identified a need for training simulation directors and updating materials. Although more and more persons are using simulated materials, no mention was made in any of the studies

revieved that directors had training in the use of materials. However, Jaspers (1970) emphasized training group leaders. He found in a workshop for recruiters that discrepancies in performance of various teams were attributable to "the leadership ability of key members of the teams rather than any particular lack of expertise." (Jaspers, 1970, p. 66) The need for updated materials is an ongoing process, but most of the studies revieved dealt with recently developed materials. A more crucial need is for simulated materials which have been shown empirically to be 1) effective for the purposes intended, and, 2) more effective than other techniques used for the same purposes.

Carefully controlled studies dealing with the effectiveness of simulation as a training device for school personnel are not readily available. Follow-ups are typically not conducted. Weinberger's (1965) statement that "The frequency and degree of transfer from the simulation context to the job are not known," is still true and indicates the need for continued research.

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